FY 1999 Technology Deployment in Environmental Management

Engineering Tomorrow's Solutions Today

Site Technology Coordination Group / Technology Deployment Center
U.S. Department of Energy, Idaho Operations Office

INEEL CH-TRU NDA Calibration Standards

Problem: *National Institute of Standards and Technology (NIST)-traceable standards for high-mass and particulate weapons-grade plutonium were required for certification of INEEL non-destructive assay (NDA) systems used for characterization of contact-handled transuranic (CH-TRU) wastes scheduled for disposition at the WIPP.*

Baseline Technology: *Intrusive sampling and destructive analysis of actual CH-TRU waste to confirm INEEL CH-TRU NDA system performance.*

Innovative Technology: *Insertion of standards into engineered waste matrix surrogate drums for assessment of INEEL CH-TRU NDA system performance.*

Comparison: *The standards allowed determination of the uncertainty of INEEL CH-TRU NDA results, as required by the WIPP Quality Assurance Program Plan, without intrusive sampling or destructive analysis of actual CH-TRU waste.*

Benefits: *Incorporation of standards into INEEL CH-TRU NDA operations is expected to reduce the need for intrusive examination of waste drums, with associated reductions in labor costs, worker exposure, and generation of secondary wastes.*

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